Lilly Presents Data on Cixutumumab in Five Subtypes of Sarcoma

Phase II Study Showed Greatest Benefit in Adipocytic Sarcoma; Least Benefit in Rhabdomyosarcoma

INDIANAPOLIS, May 19, 2011 /PRNewswire/ -- Eli Lilly and Company (NYSE: LLY) announced data from its Phase II study with cixutumumab in five subtypes of sarcoma, a cancer that develops from connective tissues in the body. Study results demonstrated that 57 percent of patients with a soft tissue sarcoma known as adipocytic sarcoma (a rare tumor that develops from fat cells) experienced stable disease. Results from the Phase II study will be presented on Monday, June 6 at 4:15 p.m. CDT during the Sarcoma Oral Abstract Session (Abstract #10004) at the 47th Annual Meeting of the American Society of Clinical Oncology (ASCO) in Chicago, Ill.

Cixutumumab is a monoclonal antibody that targets the insulin-like growth factor-1 (IGF-1) receptor. The IGF pathway plays a major role in cancer cell proliferation, survival and resistance to therapy.(1) Soft tissue sarcomas and the related Ewing family of tumors both have an overabundance of IGF-1 receptors on their surface. Preclinical and clinical studies have demonstrated that blocking the IGF-1 receptor may prevent IGF-1 signaling and therefore cancer growth.(2,3)

This trial assessed progression-free survival as a primary endpoint in 113 patients with advanced or metastatic soft tissue sarcoma and Ewing family of tumors who were treated with cixutumumab. It used the Simon optimal two-stage design, a widely accepted method for determining the sample size in Phase II clinical trials,(4) in which a pre-determined number of patients are treated in the trial's first stage; the trial is then halted and the response rate assessed. If a pre-specified minimal response rate has not been achieved, it is determined that the treatment is not worth pursuing and the trial is ended. Otherwise, the trial proceeds to a second stage, which continues until a pre-determined number of patients are enrolled.

The five tiers evaluated included: those with previously treated, advanced or metastatic rhabdomyosarcoma (tumors in muscles attached to bones); leiomyosarcoma (rare cancerous tumor of the smooth muscle cells); adipocytic sarcoma (rare tumor that develops from fat cells); synovial sarcoma (malignant tumor that develops in the synovial membrane of the joint); and Ewing sarcoma/peripheral primitive neuroectodermal tumor (tumor that forms in bone or soft tissue). Patients received cixutumumab 10 mg/kg intravenously over one hour every other week until disease progression or discontinuation for other reasons.

Patients were assessed at the completion of stage one (12 weeks). Stable disease was seen in 57 percent (n=21) of patients with adipocytic sarcoma and one (n=1) partial response (decrease in the size of a tumor) was seen with this tumor type. The study continued into stage two for the adipocytic sarcoma tier, which was fully enrolled (37 patients total). By contrast, treatment for four of the tiers (rhabdomyosarcoma; leiomyosarcoma; synovial sarcoma and Ewing sarcoma/peripheral primitive neuroectodermal tumor) was ended at the completion of stage one because the pre-specified response rate threshold was not met. Partial responses were as follows: one partial response in the Ewing sarcoma tier (n=1); 41 percent (n=9) in leiomyosarcoma; 35 percent (n=6) in synovial sarcoma; 28 percent (n=5) in Ewing family of tumors and 24 percent (n=4) in rhabdomyosarcoma.

Among all enrolled patients in the trial, the most frequent treatment-related adverse events were hyperglycemia (high blood sugar) in 5 percent of patients (n=6), and asthenia (lack or loss of strength and energy) in 4 percent of patients (n=5). Grade 3/4 events also included pain in 6 percent of patients (n=7) and thrombocytopenia (low amount of platelets in the blood) in 4 percent of patients (n=5).

"This study is just one example of Lilly Oncology's commitment to finding therapeutic options in difficult-to-treat cancers," said Richard Gaynor, M.D., vice president of product development and medical affairs at Lilly Oncology.

About Sarcoma and the Ewing Family of Tumors

Sarcoma refers to a broad group of malignant tumors found in various locations in the body.(5) There are two main types: osteosarcoma (tumors that most commonly develop at the ends of long bones, especially around the knees) and soft tissue sarcomas (tumors that develop from fat, muscle, nerves or other soft tissue).(5) Soft tissue sarcomas are rare, appear as a lump and don't usually cause pain or other symptoms.(6) An estimated 10,520 adults will be diagnosed with soft tissue sarcoma in 2011.(7) The overall five-year relative survival for soft tissue sarcoma is around 50 percent and has remained unchanged for many years.(8,9)

The Ewing family of tumors is a group of cancers that originate in the bones or nearby soft tissue and most commonly affect

teenagers.(10) The incidence of Ewing sarcoma family of tumors is approximately three per 1,000,000 per year and has remained unchanged for 30 years.(11)

About Lilly Oncology

For more than four decades, Lilly Oncology, a division of Eli Lilly and Company, has been dedicated to delivering innovative solutions that improve the care of people living with cancer. Because no two cancer patients are alike, Lilly Oncology is committed to developing novel treatment approaches. To learn more about Lilly's commitment to cancer, please visit www.LillyOncology.com.

About Eli Lilly and Company

Lilly, a leading innovation-driven corporation, is developing a growing portfolio of pharmaceutical products by applying the latest research from its own worldwide laboratories and from collaborations with eminent scientific organizations. Headquartered in Indianapolis, Ind., Lilly provides answers — through medicines and information — for some of the world's most urgent medical needs.

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This press release contains forward-looking statements about the potential of cixutumumab and reflects Lilly's current beliefs. However, as with any pharmaceutical compound, there are substantial risks and uncertainties in the process of development and commercialization. There is no guarantee that cixutumumab will be approved by the relevant regulatory authorities or prove to be commercially successful. For further discussion of these and other risks and uncertainties, see Lilly's filings with the United States Securities and Exchange Commission. Lilly undertakes no duty to update forward-looking statements.

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(2) Burtrum D, et al. A Fully Human Monoclonal Antibody to the Insulin-Like Growth Factor I Receptor Blocks Ligand-Dependent Signaling and Inhibits Human Tumor Growth in Vivo. Cancer Res. 63:8912, December 15, 2003.

(3) Wu J, et al. In vivo Effects of the Human Type I Insulin-Like Growth Factor Receptor Antibody A12 on Androgen-Dependent and Androgen-Independent Xenograft Human Prostate Tumors. Clin Cancer Res. 11:3065, April 18, 2005.

(4) SAS Global Program, "Using SAS® to Determine Sample Sizes for Traditional 2-Stage and

Adaptive 2-Stage Phase II Cancer Clinical Trial Designs," http://www2.sas.com/proceedings/forum2007/188-2007.pdf, (April 26, 2011).

(5) Mayo Clinic, "Sarcoma," http://www.mayoclinic.org/sarcoma/, (April 26, 2011).

(6) National Cancer Institute, "Soft Tissue Sarcomas: Questions and Answers," http://www.cancer.gov/cancertopics/factsheet/Sites-Types/soft-tissue-sarcoma, (April 26, 2011).

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(9) National Cancer Institute, "Ewing Sarcoma Family of Tumors Treatment (PDQ®)," http://www.cancer.gov/cancertopics/pdq/treatment/ewings/HealthProfessional/page1, (April 26, 2011).

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